

AMENDMENTS TO THE CLAIMS

The below listing of claims replaces all prior versions of claims in the application.

List of Claims:

1. (Currently Amended) A cooling apparatus for a hybrid vehicle,
the hybrid vehicle comprising:
an internal combustion engine for driving the hybrid vehicle;
a motor as a power source for driving the hybrid vehicle together with the internal
combustion engine, and
a motor control device for controlling an operation of the motor; and
the cooling apparatus for the hybrid vehicle comprising:
a cooling circuit for cooling said internal combustion engine and said motor control
device by a common coolant; and, and cooling said coolant by radiating heat using a radiator,
said cooling circuit including,
a first flow path, through which coolant for cooling the internal combustion engine flows,
and
a second flow path, through which the coolant for cooling the motor control device flows,
branched from the first flow path at a location inside of the radiator, further the second flow path
is again merged into the first flow path downstream of the motor control device, and the merged
coolant is circulated by a water pump provided downstream of the merged portion,
the cooling apparatus for the hybrid vehicle further comprising:

a temperature setting device ~~for independently setting in which the coolant circulating in the second flow path which is branched from the first flow path at the location inside of the radiator is further cooled, and thereby~~ a management temperature of the coolant at said internal combustion engine and a management temperature of the coolant at said motor control device are independently set.

2. (Currently Amended) A cooling apparatus for a hybrid vehicle according to claim 1, wherein the cooling apparatus comprises a radiator provided with a plurality of flow paths for radiating heat of said internal combustion engine and said motor control device, and the temperature setting device sets said management temperatures independently by flowing the coolant through each of said ~~plurality of flow paths~~ first flow path and said second path.

3. (Original) A cooling apparatus for a hybrid vehicle according to claim 1 or claim 2, wherein an output shaft of said internal combustion engine and an output shaft of said motor are mechanically connected.

4. (Previously Presented) A cooling apparatus for a hybrid vehicle according to claim 1, wherein the cooling apparatus comprises a plurality of thermostats having operation temperatures different from each other, and said management temperatures are independently set at different temperatures by means of said plurality of thermostats.

5. (Currently Amended) A cooling apparatus for a hybrid vehicle, ~~according to claim 1,~~
~~wherein the cooling apparatus comprising:~~

the hybrid vehicle comprising:

an internal combustion engine for driving the hybrid vehicle;

a motor as a power source for driving the hybrid vehicle together with the internal
combustion engine; and

a motor control device for controlling an operation of the motor,

the cooling apparatus for the hybrid vehicle comprising:

a cooling circuit for cooling said internal combustion engine and said motor control
device by a common coolant;

a circulation path having a water jacket provided in an interior of said internal
combustion engine and a water pump which circulates said coolant to said water jacket;

a radiator having a plurality of flow paths constituting different flow paths for said
coolant;

a supply path which branches from said circulation path downstream of said water jacket
for flowing said coolant to said radiator;

a first flow path for flowing said coolant to said circulation path from said radiator
through a first thermostat which has an operation temperature set relatively high;

a second flow path for flowing said coolant to said circulation path from said radiator
through a second thermostat which has an operation temperature set relatively low, and also
supplies said coolant to said motor control device; and

a bypass flow path which connects said supply flow path to a position downstream of said second thermostat of said second flow path.

6. (Original) A cooling apparatus for a hybrid vehicle according to claim 5, wherein said second thermostat is disposed at a position downstream of said motor control device.

7. (Original) A cooling apparatus for a hybrid vehicle according to claim 6, wherein said motor is arranged in a position downstream of said motor control device in said second flow path, and

said second thermostat is arranged in a position between said motor control device and said motor and is connected to said bypass flow path.

8. (Previously Presented) A cooling apparatus for a hybrid vehicle according to claim 5, wherein said second thermostat is arranged at a position upstream of said motor control device.

9. (Currently Amended) A cooling apparatus for a hybrid vehicle, ~~according to claim 1,~~
~~wherein the cooling apparatus comprising:~~

the hybrid vehicle comprising:

an internal combustion engine for driving the hybrid vehicle;

a motor as a power source for driving the hybrid vehicle together with the internal combustion engine; and

a motor control device for controlling an operation of the motor,
the cooling apparatus for the hybrid vehicle comprising:
a cooling circuit for cooling said internal combustion engine and said motor control
device by a common coolant;

a circulation path having a water jacket provided in an interior of said internal combustion engine and a water pump which circulates said coolant to said water jacket;

a radiator having a plurality of flow paths constituting different flow paths for said coolant;

a supply path which branches off from said circulation path at a position downstream of said water jacket and which flows said coolant to said radiator;

a first flow path which flows said coolant to said circulation path from said radiator through a first thermostat which has a relatively high operation temperature;

a second flow path which flows said coolant to said circulation path from said radiator via a second thermostat which has a relatively low operation temperature, and also supplies said coolant to said motor control device; and

a bypass flow path which connects, upstream of said water jacket, said circulation path at a position between said water pump and said water jacket to said second flow path at a position downstream of said second thermostat.

10. (Currently Amended) A cooling apparatus for a hybrid vehicle, ~~according to claim 1,~~
~~wherein the cooling apparatus comprising:~~

the hybrid vehicle comprising:

an internal combustion engine for driving the hybrid vehicle;

a motor as a power source for driving the hybrid vehicle together with the internal combustion engine; and

a motor control device for controlling an operation of the motor,

the cooling apparatus for the hybrid vehicle comprising:

a cooling circuit for cooling said internal combustion engine and said motor control device by a common coolant;

a circulation path having a water jacket provided in an interior of said internal combustion engine and a water pump which circulates said coolant to said water jacket;

a radiator having a plurality of flow paths constituting different flow paths for said coolant;

a supply path which branches from said circulation path at a position downstream of said water jacket and which supplies said coolant to said radiator;

a first flow path which flows said coolant to said circulation path from said radiator through a first thermostat which has a relatively high operation temperature; and

a second flow path which flows said coolant to said circulation path from said radiator through a second thermostat which has a relatively low operation temperature, and also supplies said coolant to said motor control device; and

said second thermostat is disposed in said circulation path.